

The Associations of Atherogenic Risk Factors with Pulse Analyses and Flow-Mediated Vasodilatation of Brachial Artery

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Increased arterial stiffness is an independent risk for cardiovascular disease, and pulse wave velocity (PWV) and/or pressure wave analysis such as augmentation index (AI) are useful tools for the assessment of arterial stiffness. On the other hand, endothelial dysfunction is noted as a marker of early stage of atherosclerosis, and endothelial dysfunction is thought to affect arterial stiffness. In clinical settings, endothelial function is assessed by the flow-mediated vasodilatation of brachial artery (FMD), and recently, semi-automatic device to measure FMD is available in Japan. Therefore, several data to examine the associations of atherosclerotic risk factors with PWV, AI and/or FMD in Japanese general population have been accumulated. In this session, we will present our data concerning the associations of atherogenic risk factors with PWV, AI and/or FMD. Metabolic syndrome (MetS) and hyperuricemia (HUA) are focused as risk for cardiovascular disease. In our data, MetS increases PWV and attenuates FMD but does not affect AI. On the contrary, HUA increases AI and attenuated FMD but does not affect PWV. Thus, atherogenic risk factors differently affect PWV, AI and FMD.